<sup>1</sup> Faculty of Food Technology and Biotechnology, Zagreb, <sup>2</sup> Institute for Medical Research and Occupational Health, Zagreb, <sup>3</sup> Faculty of Electrical Engineering, Zagreb, CROATIA

- IX -16 MUTAGENIC ACTIVITY OF POLYPHENOLS UPON NITROSATION: A STRUCTURE-ACTIVITY STUDY
  - <sup>1</sup> GASPAR, J. <sup>1</sup>& LAIRES, A., <sup>1</sup> COSTA, S., <sup>1</sup> RODRIGUES, A. S., and <sup>1</sup> RUEFF, J. <sup>1</sup> Faculty of Medical Sciences UNL, Dept. Genetics, Lisboa, PORTUGAL, <sup>2</sup> Faculty of Sciences and Technology UNL, Monte da Caparica, PORTUGAL
- IX -17 EVALUATION OF RAT BONE MARROW AND PERIPHERAL BLOOD MICRONUCLEUS ASSAYS USING A RANGE OF IARC GROUP I CARCINOGENS
   GATEHOUSE, D., 1 WOOTTON, A., 1 PLUMSTEAD, M., 2 PROUDLOCK, R., 2 ALLE N, J., 1 DOWNES, J., 1 WILLIAMS, R. and 1 MORRISS, S.
   Genetic and Reproductive Toxicology, Glaxo Group Research, Ware, U. K., 2 Huntingdon Research Centre, Huntingdon, U. K.
- IX -18 BACTERIAL MUTAGENICITY OF METHYLENE CHLORIDE GRAVES, R. J., CALLANDER, R. D. and GREEN, T. ZENECA Central Toxicology Laboratory, Alderley Park, Macelesfield, Cheshire, SK10 4TJ, U.K.
- IX -19 MUTAGENICITY AND ANTIMUTAGENICITY OF 18 SYNTHETIC 3-NITROFLAVONES

  1 LAGET, M., 1 DE MEO, M., 2 DAUZONNE, D., 1 GUIRAUD, H. and 1 DUMENIL, G.
  1 Laboratoire de Microbiologie, Faculté de Pharmacie, Marseille, FRANCE, 2 Institut Curie, section Biologie, Paris, FRANCE
- IX -20 DOMINANT LETHAL ASSAY OF COMBINED EXPOSURE TO X-RAYS AND ANTINEOPLASTIC DRUGS
   LENARCZYK, M., DOBRZYNSKA, M. and GAJEWSKI, A.K.
   National Institute of Hygiene, Warsaw, POLAND, Academy of Physical Education, Warsaw, POLAND
- IX -21 MUTAGENIC EFFECT OF BIOLOGICALLY ACTIVE CRUDE EXTRACT OF Crambe crambe USING THE ASSAY METHODS WITH Salmonella/ MICROSOME
   LERIN, M. J., SANCHEZ-MANTAS, C., CUEVAS, J. A., RODRIGUEZ-MURCIA, C., URIZ, M. J., BARRUECO, C. and DE LA PEÑA, E.
   Centro de Ciencias Medioambientales, CSIC, Madrid, Centro de Investigaciones Biológicas, CSIC, Madrid, Centro de Estudios Avanzados de Blanes, Centro Nacional de Sanidad
   Ambiental, Instituto de Salud Carlos III, Majadahonda, SPAIN
- IX-22 DETECTION OF SISTER CHROMATID EXCHANGES IN MUSSEL Mytilus galloprovincialis

  MENDEZ, J., PASANTES, J. J. and MARTINEZ-EXPOSITO, M. J.

  Dto. Biología Celular y Molecular (Area de Genética), Fac. Ciencias, Universidad de La Coruña, SPAIN
- 1X -23 SHORT-TERM ASSAYS WITH THIRAM IN YEAST Saccharomyces cerevisiae MORICHETTI, E., BOCCI, A., DELLA CROCE, C. and BRONZETTI, G. Istituto di Mutagenesi e Differenziamento CNR, Pisa, ITALY

- IX -25 MUTAGENIC ACTIVITY ON TA98, YG1021 AND YG1024 Salmonella STRAINS OF ENVIRONMENTAL PARTICULATE IN MICROSUSPENSION AND PLATE ASSAYS NARDINI, B., GRANELLA, M. and CLONFERO, E. Institute of Occupational Health, University of Padova, ITALY
- IX -26 MUTAGENIC AND ANTIMUTAGENIC ACTIVITIES IN EXTRACTS OF SOME USUALLY SPANISH FOODS AND SPICES.

  NORIEGA, P. and DE PEDRO, M. A.

  1 Universidad Nacional de San Agustín, Facultad de Medicina, Arequipa, PERU, 2 Centro de Biología Molecular, C.S.I.C., Universidad Autónoma de Madrid, SPAIN
- IX -27 STUDY OF THE POSSIBLE GENOTOXIC ACTIVITY OF THREE PYRETHROID INSECTICIDES (DELTAMETHRIN, FENPROPATHRIN AND PERMETHRIN) IN Drosophila melanogaster
  PARDO, G. A., NERHING, R. G., CREUS, A., MARCOS, R. and XAMENA, N. Unitat de Genètica, Departament de Genètica i de Microbiologia, Universitat Autônoma de Barcelona, Bellaterra (Cerdanyola del Vallès), SPAIN
- IX -28 PERSISTENCE AND ACCUMULATION OF DNA ADDUCTS INDUCED BY THE SYNTHETIC STEROID CYPROTERONE ACETATE IN RAT LIVER in vivo TOPINKA, J., SCHWARZ, L. R., WERNER, S., SRAM, R. J. and WOLFF, T. <sup>1</sup> Institute of Experimental Medicine, Prague, CZECH REPUBLIC, <sup>2</sup> GSF-Institute of Toxicology, Neuherberg, GERMANY
- IX -29 GENOTOXICITY OF FIVE HERBICIDES IN *Drosophila melanogaster* AND IN PERIPHERAL BLOOD HUMAN LYMPHOCYTE CULTURES

  TORRES, C., RIBAS, G., SURRALLES, J., CREUS, A., XAMENA, N. and MARCOS, R. Unitat de Genètica, Departament de Genètica i de Microbiologia, Universitat Autònoma de Barcelona, Bellaterra (Cerdanyola del Vallès), SPAIN
- IX -30 MUTAGENICITY ASSESSMENT OF AIRBORNE PARTICLES IN MEXICO CITY VILLALOBOS-PIETRINI, R., BLANCO, S., VILLARRUEL, E. and GOMEZ-ARROYO, S. Laboratorio de Citogenética y Mutagénesis Ambientales, Centro de Ciencias de la Atmósfera, UNAM, Coyoacán, MEXICO and Centro de Investigación en Genética y Ambiente, Universidad Autónoma de Tlaxcala, MEXICO
- IX -31 MICRONUCLEI, SCEs AND DNA ADDUCTS IN SWISS MICE AFTER SUBCHRONIC EXPOSURE TO THE CARCINOGEN 2-AAF
   ZIJNO, A., MARCON, F., LEOPARDI, P., CREBELLI, R., ZITO, R., and VERDINA, A.
   Istituto Superiore di Sanità, Roma, Istituto Regina Elena, Roma, ITALY

-33 -34 -33 -34 -33(1)

33

## X. METABOLISM OF MUTAGENS AND CARCINOGENS

- X -1 THE INDUCTION OF ANEUPLOIDY AND LIPID PEROXIDATION BY HALOGENATED HYDROCARBONS ANDREOLI, C., BENIGNI, R., COTTA-RAMUSINO, M. and CREBELLI, R. Istituto Superiore di Sanità, Roma, ITALY
- X -2 INHIBITORY EFFECT OF DAIRY PRODUCTS ON THE GENOTOXICITY OF SOME MUTAGENS
   <sup>1</sup> CASSAND, P., <sup>1</sup> ABDELALI, H., <sup>2</sup> BOULEY, C., <sup>3</sup> DENARIAZ, G., <sup>1</sup> NARBONNE, J.F.
   <sup>1</sup> Laboratoire de Toxicologie Alimentaire, Université de Bordeaux, Talence, FRANCE,
   <sup>2</sup> BSN, FRANCE, <sup>3</sup> Centre International de Recherche Daniel Carasso, BSN, FRANCE
- X -3 CHROMOSOME ANALYSIS IN HUMAN PERIPHERAL BLOOD LYMPHOCYTES TREATED in vitro WITH AFLATOXIN B1 (AB1), CYCLOPHOSPHAMIDE (CPA) AND BENZO-a-PYRENE (BaP) IN PRESENCE OF A METABOLIC ACTIVATION SYSTEM: COMPARISON OF AROCLOR-1254 versus PHENOBARBITAL-beta-NAPHTHO-FLAVONE INDUCED RAT S9 LIVER HOMOGENATE FRACTION AND EFFECT OF A 21 h versus 45 h RECOVERY PERIOD CHETELAT, A.

Pharma Division, Preclinical Research, Department of Toxicology, F. Hoffmann-La Roche Ltd., Basel, SWITZERLAND

- X -4 STUDIES OF PLANT METABOLIC ACTIVATION WITH Avocado pear FRACTIONS CHIAPELLA, C., RIERA, J. and LLAGOSTERA, M. Unitat de Microbiologia. Dept. de Genètica i de Microbiologia, Universitat Autònoma de Barcelona, Bellaterra, SPAIN
- X -5 THE ABILITY OF QUERCETIN AND ITS METABOLITES TO INTRODUCE SINGLE STRAND BREAKS INTO BACTERIAL DNA
  CZECZOT, H. and RAHDEN-STARON, I.
  Department of Biochemistry, Medical School, Warszawa, POLAND
- X -6 AN INVESTIGATION OF THE ANEUGENIC AND CLASTOGENIC EFFECTS OF CHLORINATED SOLVENTS IN AHH-I HUMAN LYMPHOBLASTOID CULTURES AND GENETICALLY ENGINEERED MCL-5 CELLS WHICH EXPRESS cDNAS ENCODING HUMAN CYTOCHROME P-450 ENZYMES DOHERTY, A. T., ELLARD, S., PARRY, E. M. and PARRY, J. M. School of Biological Sciences, University College of Swansea, Singleton Park, U. K.
- X -7 METABOLIC DIFFERENCES BETWEEN WHOLE BLOOD AND ISOLATED LYMPHOCYTE CULTURES FOR MICRONUCLEUS (MN) INDUCTION ELHAJOUJI, A., SANTOS, A. P., VAN HUMMELEN, P. and KIRSCH-VOLDERS, M. Human Genetics Laboratory, Vrije Universiteit Brussels, BELGIUM
- X-8 EFFECT OF DIALLYL SULFIDE AND ALLYL MERCAPTANE ON DIMETHYLNITROSOAMINE INDUCED HGPRT MUTANTS IN CHINESE HAMSTER V79 CELL LINE.
  FIORIO, R., DELLA CROCE, C., VELLOSI, R., and BRONZETTI, G. Istituto di Mutagenesi e Differenziamento, CNR, Pisa, ITALY

- X -10 THE EFFECT OF Ginkgo biloba EXTRACT ON in vitro DNA FRAGMENTATION AND LIPID PEROXIDATION

   I HUBALEK, F., I SRAM, R. J. and DROY-LEFAIX, T.
   I Institute of Experimental Medicine, Academy of Sciences, Prague, CZECH REPUBLIC, IPSEN, FRANCE
- X -11 FURTHER INVESTIGATIONS INTO THE GENOTOXICITY OF CYPROTERONE ACETATE
  KASPER, P., GERHARD, A., KAUFFMANN, G., MADLE, H. and MÜLLER, L.
  Institute for Drugs, Federal Health Administration (BGA), Berlin, GERMANY
- X-12 INHIBITORY EFFECTS OF SOLVENTS ON THE in vitro GENOTOXICITY OF INDIRECT ACTING MUTAGENS KASPER, P., GINDLER, K. and MÜLLER, L. Institute for Drugs, Federal Health Administration (BGA), Berlin, GERMANY
- X -13 PROTECTIVE EFFECTS OF PYRIDINE N-OXIDE in vitro KOZIOROWSKA, J. and ANUSZEWSKA, E. L. Drug Institute, Warszawa, POLAND
- X-14 INDUCTION OF CHROMOSOME ABERRATIONS BY VARIOUS BENZO[α]PYRENE METABOLITES IN GENETICALLY ENGINEERED V79 CHINESE HAMSTER CELL LINES EXPRESSING CYTOCHROMES P450

  <sup>1</sup> KULKA, U., <sup>1</sup> SEIDEL, A., <sup>2</sup> GLATT, H. R. and <sup>2</sup> BAUCHINGER, M.

  <sup>1</sup> Institut für Strahlenbiologie, GSF, Neuherberg, GERMANY, <sup>2</sup> Institut für Toxikologie, Universität Mainz, GERMANY
- X -15 METABOLIC ACTIVATION OF 6-AMINOCHRYSENE BY A HEPATIC CYTOSOLIC OXYGENASE
  MARCZYLO, T. and IOANNIDES, C.
  Molecular Toxicology Group, Division of Toxicology, School of Biological Sciences, University of Surrey, Guildford, U.K.
- X -16 THE CONSTITUTIVE LEVEL OF P4502B1 IN RAT LUNG IS DECREASED BY CHROMIUM(VI)

  <sup>1</sup> MIKALSEN, A., <sup>1</sup> ALEXANDER, J., <sup>1</sup> HINDRUM, M., <sup>2</sup> INGELMAN-SUNDBERG, M.

  <sup>1</sup> Department of Environmental Medicine, National Institute of Public Health, 0462 Oslo, NORWAY, and <sup>2</sup> Department of Physiology Chemistry, Karolinska Institute, Stockholm, SWEDEN
- X-17 COMPARISON OF 21 COMMERCIAL AZO DYES IN Salmonella typhimurium AFTER METABOLIC ACTIVATION BY LIVER S9 FROM RATS AND HAMSTERS POTH, A. and HEIDEMANN, A.
  C C R Cytotest Cell Research GmbH & Co. KG, Roßdorf, GERMANY

- X-18 THE USE OF CYPIA2 AND ACETYLTRANSFERASE EXPRESSING V79 CELLS IN THE METABOLIC ACTIVATION OF AROMATIC AMINES
  - $^{1}$  RODRIGUES, A. S.,  $^{1}$  DUARTE, I.,  $^{2}$  LAIRES, A.,  $^{1}$  CHAVECA, T.,  $^{3}$  GLATT, H. R. and  $^{1}$  RUEFF, J.
  - <sup>1</sup> Faculty of Medical Sciences UNL, Dept. Genetics, Lisboa, PORTUGAL, <sup>2</sup> Faculty of Sciences and Technology UNL, Monte da Caparica, PORTUGAL, <sup>3</sup> Institut für Toxikologie, Johannes-Gutenberg-Universität. Mainz, GERMANY
- X-19 REACTIVE OXIGEN SPECIES AND MUTAGENESIS SEREDENIN, S. B., GUSEVA, N. V. and DURNEV, A. D. Res. Institute of Pharmacology, Moscow, RUSSIA
- X -20 THE PRO AND ANTI-OXIDATIVE EFFECTS OF COFFEE ARE REFLECTED IN ITS MUTAGENIC AND ANTIMUTAGENIC ACTIVITIES
  STADLER, R., TURESKY, R. J., MÜLLER, O. and LEONG-MORGENTHALER, P. Centre de Recherche Nestlé, Lausanne, SWITZERLAND
- X -21 EFFECT OF EGb-761 ON LIPID PEROXIDATION, DNA REPAIR AND ANTIOXIENZYMES ACTIVITY

  'STEJSKALOVA, J., 'BINKOVA, B., 'SRAM, R. J., 'TOPINKA, J. and 'DROY-LEFAIX, M. T.

  'LGE, c/o UEM, Prague, CZECH REPUBLIC, 'IPSEN Paris, FRANCE
- X -22 DETECTION OF DNA ADDUCTS IN Mytilus galloprovincialis TREATED WITH BENZO(A)PYRENE OR NATURALLY EXPOSED TO WATER POLLUTANTS VENIER, P., PAVANELLO, S., BONALDO, A., BRUNETTI, R. and LEVIS, A. G. Dept. of Biology, University of Padova, ITALY
  - X -23 MUTAGENICITY OF FUNGICIDES USING Zea mays EXTRACTS YSERN, P., RIERA, J., RIVERA, E. and LLAGOSTERA, M. Unitat de Microbiologia, Dept. de Genètica i de Microbiologia, UAB, Bellaterra, SPAIN

## XI. CLASTOGENICITY AND ANEUPLOIDY

- XI-1 PRELIMINARY RESULTS WITH THE USAGE OF C-AND N-BANDING OF MICRONUCLEI IN BINUCLEATED HUMAN LYMPHOCYTES.
   <sup>1</sup> CARIA, H., <sup>1</sup> COELHO, R., <sup>1</sup>&<sup>2</sup> CHAVECA, T. and <sup>1</sup> RUEFF, J.
   <sup>1</sup> Dep. of Genetics, Faculty of Medical Sciences, New University of Lisbon, <sup>2</sup> Faculty of Pharmacy, University of Lisbon, PORTUGAL
- XI -2 ELECTROPORATION EXPERIMENTS TO ASSESS THE POSSIBLE ROLE OF HYDROGEN PEROXIDE GENERATED BY IONIZING RADIATION IN CHROMOSOME DAMAGE CORTES, F and DOMINGUEZ, I. Department of Cell Biology, Faculty of Biology, Sevilla, SPAIN
- XI -3 EFFECTS OF COMBINED X-RAYS-ACRYLAMIDE TREATMENT IN MOUSE BONE MARROW MICRONUCLEUS TEST

  1 DOBRZYNSKA, M. M., 1 LENARCZYK, M., 2 GAJEWSKI, A. K.
  - <sup>1</sup> National Institute of Hygiene, Warsaw, <sup>2</sup> Academy of Physical Education, Warsaw, POLAND

- XI -5 THE ANALYSIS OF MICRONUCLEI INDUCED BY CLASTOGENIC AND ANEUGENIC CHEMICALS IN HUMAN PERIPHERAL LYMPHOCYTES ELLARD, S. and PARRY, E. M. School of Biological Sciences, University College of Swansea, Singleton Park, U. K.
- XI -6 ISOLATION AND CHARACTERIZATION OF CHROMOSOME SPECIFIC PROBES FOR THE ANALYSIS OF ANEUPLOIDY IN RAT CELLS
   I HOEBEE, B., I DE STOPPELAAR, J. M., I FAESSEN, P., I ESSERS, J., I MONARD, S. and I MOHN, G. R.
   I Laboratory of Carcinogenesis and Mutagenesis, National Institute of Public Health and Environmental Protection Bilthoven, THE NETHERLANDS, I FACS Laboratory, Imperial Cancer Research Fund, London U. K.
- XI-7 PROTOCOL DESIGN OF in vitro CLASTOGENICITY ASSAY, THE USE OF CONTINUOUS EXPOSURE WITH S9
  JENKINSON, P. C., WRIGHT, N. P. and DURWARD, R.
  Safepharm Laboratories Limited, Derby, U. K.
- XI -8 DETECTION OF CHROMOSOME LOSS AND NON DISJUNCTION IN BINUCLEATED LYMPHOCYTES BY in situ HYBRIDIZATION MARCON, F., ZIJNO, A. and LEOPARDI, P. Istituto Superiore di Sanità, Rome, ITALY
- XI-9 COMBINATION OF FLOW CYTOMETRY AND FLUORESCENCE in situ HYBRIDIZATION (FISH) TO STUDY THE DNA CONTENT AND CHROMOSOMAL COMPOSITION OF MICRONUCLEI (MN)

  <sup>1</sup> MILLER, B. M. and <sup>2</sup> NÜSSE, M.

  <sup>1</sup> PRPT, Preclinical Division, Pharma Research, Hoffmann La-Roche AG, Basel, SWITZERLAND, <sup>2</sup> GSF-Institut für Biophysikalische Strahlenforschung, Neuherberg, GERMANY
- XI -10 CLASTOGENIC EFFECTS ON QUIESCENT HUMAN B- AND T-LYMPHOCYTES MILLER, K. Abteilung Humangenetik, Medizinische Hochschule Hannover, GERMANY
- XI -11 CYTOGENETIC EFECTS OF COMBINED TREATMENTS WITH RESTRICTION ENDONUCLEASES INDUCING COHESIVE- OR BLUNT-ENDED DOUBLE-STRAND BREAKS IN DNA ORTIZ, T., PIÑERO, J. and CORTES, F. Department of Cell Biology, University of Sevilla, SPAIN
- XI-12 THE EFFECTS OF IONIZING IRRADIATION ON THE ONION (*Allium cepa* L.)

  <sup>1</sup> PARADIZ, J., <sup>2</sup> SKRK, J. and <sup>1</sup> DRUSKOVIC, B.

  <sup>1</sup> Institute of Biology, University of Ljubljana, <sup>2</sup> Institute of Oncology, Department of Radiobiology, Ljubljana SLOVENIA